

Warm-Up:

Factor.

1) $3x^2 - 7x - 20$

~~$(x+5)(x-4)$~~

~~$12x-2$~~

2) $10x^2 - 7x - 3$

$(10x+3)(x-1)$

$10x^2 + 10x + 3x - 3$

3) $16w^2 + 0w - 25$

$(4w+5)(4w-5)$

8) $(6pq + 16p)(-15q - 40)$

$2p(3q+8) - 5(3q+8)$

$(3q+8)(2p-5)$

Section 8-5: Difference of Two Squares

Examples:

$$1) y^2 - 81 = y^2 + 0y - 81$$

$$(y + 9)(y - 9)$$

$$2) 9a^2 - 121$$

$$(3a + 11)(3a - 11)$$

$$3) 64x^2 - 4$$

$$(8x - 2)(8x + 2)$$

Examples:

Solve.

$$4) 25x^2 = 100$$

$$\begin{array}{r} -100 \quad -100 \\ \hline 25x^2 - 100 = 0 \end{array}$$

$$25(x^2 - 4) = 0$$

$$5) 16x^2 - 36 = 0$$

$$4(4x^2 - 9) = 0$$

$$4(x - 3)(x + 3) = 0$$

$$2x - 3 = 0 \text{ or } 2x + 3 = 0$$

$$2x = 3$$

$$2x = -3$$

$$x = \frac{3}{2} \text{ or } x = -\frac{3}{2}$$

$$25(x^2 - 4) = 0$$

$$25(x + 2)(x - 2) = 0$$

$$x + 2 = 0 \text{ or } x - 2 = 0$$


$$x = -2 \text{ or } x = 2$$

Section 8-6: Trinomial Squares

Examples:

Factor.

1) $x^2 - 12x + 36$

$$(x - 6)(x - 6) = (x - 6)^2$$


2) $9x^2 + 24x + 16$

$$(3x + 4)(3x + 4) = (3x + 4)^2$$

3) $25x^2 - 80xy + 64y^2$

$$(5x - 8y)(5x - 8y) = (5x - 8y)^2$$

Homework: pg. 451-452 #12-30 even, 34, 40
pg. 458 #1, 2, 12-15 all, 48

Section 8-5 Vocab

16) $-18r^3 + 242r$

$$-2r(9r^2 - 121)$$
$$-2r(\quad \times \quad)$$